IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants	:	Snodgrass, et. al.	Confirmation No.: 9007
App. No.	:	09/876,611	
Filed	:	June 7, 2001	
For	:	IDENTIFYING AND PROVIDING TARGETED CONTENT TO USERS HAVING COMMON INTERESTS	
Examiner	:	John Van Bramer	

APPEAL BRIEF

United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Appellants, Applicants in the above-captioned patent application, appeal the final rejection of Claims 38-65 set forth in the final Office Action mailed on October 20, 2006 (hereinafter "the Final Office Action"). Please charge any fees that may be required now or in the future to Deposit Account No. 11-1410.

I. REAL PARTY IN INTEREST

The real party of interest in the present application is Amazon.com, Inc.

II. RELATED PROCEEDINGS

No related appeals, interferences or judicial proceedings are currently pending.

III. STATUS OF CLAIMS

Claims 38-65, which are attached hereto as an appendix, are currently pending in the application and are the subject of this appeal. All of these claims stand rejected. All of the remaining claims, Claims 1-37, have been canceled.

IV. STATUS OF AMENDMENTS

An Amendment after Final was filed on December 5, 2006 to address the Examiner's objections to dependent Claims 44, 45, 57 and 58. Appellants' representative conducted a telephone interview with Examiner Van Bramer prior to filing that amendment, and reached an agreement on how to amend these claims. According to an Advisory Action dated December 27, 2006, the Amendment after Final has been entered, and the objections to Claims 44, 45, 57 and 58 have been withdrawn.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The present application includes two independent claims, nos. 38 and 53. Each independent claim is summarized below, with citations to corresponding portions of the originally-filed specification and drawings as required by 37 C.F.R. § 41.37(c)(1)(v). These citations are provided to illustrate specific examples and embodiments of the recited claim language, and are not intended to limit the claims.

<div align="center">Claim 38</div>

Claim 38 is directed to a computer implemented method. The method comprises:

- tracking referrals of users from each of a plurality of referring web sites (see, e.g., 120 in Figs. 1 and 7) to a target web site (see, e.g., 130 in Figs. 1 and 7) that hosts an electronic catalog of items, said referrals resulting from user selections of links provided on the referring web sites (see, e.g., page 2, lines 25-30; page 5, lines 10-28; page 6, lines 6-15; page 6, lines 30-32; page 7, lines 5-14; page 11, line 25 to page 12, line 9; and page 17, line 3 to page 18, line 6);

- identifying a group of users referred to the target web site by a selected subset of said plurality of referring web sites, said group of users comprising a plurality of users, and

representing a subpopulation of a general user population of the target web site (see, e.g., page 2, lines 25-30; page 6, lines 19-22; page 9, lines 19-22; page 24, lines 23-25; and Fig. 8, block 820); and

- collecting user activity data reflective of preferences of particular users for particular items represented in the electronic catalog of items, said user activity data encompassing actions of both members and non-members of said group of users (see, e.g., page 3, lines 1-4; page 6, lines 11-15; page 8, line 8 to page 9, line 15; and page 20, lines 26-30);

- identifying a set of items that correspond to group preferences of said group of users, wherein the set of items is identified based on the collected user activity data of both the members and the non-members of said group of users (see, e.g., page 3, lines 1-4; page 6, lines 22-26; page 7, lines 19-21; page 11, lines 3-17; page 33, lines 1-31; and originally-filed Claim 11); and

- causing the set of items to be displayed (a) on the target web site (see, e.g., Fig. 3) to users who are referred thereto from a referring web site in said subset of referring web sites, and/or (b) on a referring web site (see, e.g., Fig. 2) in said subset of referring web sites (see, e.g., page 3, lines 4-11; page 5, line 27 to page 6, line 5; page 6, lines 27-29; Fig. 2 and the associated description at page 12, lines 10-26; page 13, lines 7-28; page 14, lines 6-13; page 29, line 14 to page 30, line 32; Fig. 11; and page 32, lines 1-8).

Claim 53

Claim 53 is directed to a computer system. The computer system comprises:

- a referral tracking system that tracks referrals of users from a plurality of referring sites (see, e.g., 120 in Figs. 1 and 7) to a target site (see, e.g., 130 in Figs. 1 and 7), said target site including an electronic catalog of items (see, e.g., page 2, lines 25-30; page 5, lines 10-28; page 6, lines 6-15; page 6, lines 30-32; page 7, lines 5-14; page 11, line 25 to page 12, line 9; and page 17, line 3 to page 18, line 6);

- a data repository that stores user activity data reflective of user actions performed with respect to items represented in the electronic catalog, said user activity data reflective of user preferences for particular items (see, e.g., block 132 in Fig. 1; page 3, lines 1-4; page

6, lines 11-15; page 6, line 32 to page 7, line 4; page 8, line 8 to page 9, line 15; and page 20, lines 18-30); and

- a recommendations service configured to (a) identify a group of users that have been referred to the target site by a selected subset of the referring sites, (b) analyze the user activity data of both members and non-members of said group to identify a set of items that are significantly more popular in the group than in a general user population of the target site, and (c) cause the identified set of items to be suggested to users that visit a referring site in said subset of referring sites (see, e.g., page 3, lines 1-11; page 5, line 27 to page 6, line 5; page 6, lines 22-29; page 7, lines 19-21; page 11, lines 3-17; Fig. 2 and the associated description at page 12, lines 10-26; page 13, lines 7-28; page 14, lines 6-13; page 19, line 1 to page 20, line 13; Fig. 8, and the associated description at page 24, line 10 to page 26, line 17; page 29, line 14 to page 30, line 32; Fig. 11; page 32, lines 1-8; and page 33, lines 1-31).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The following grounds for rejection are to be reviewed on appeal:

1.   The rejection of Claims 46 and 59 under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential steps.

2.   The rejection of Claims 38-65 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,356,879 to Aggarwal et al. (hereinafter "Aggarwal") in view of Zaiane et al., "Discovering Web Access Patterns and Trends by Applying OLAP and Data Mining Technology on Web Logs," in Proceedings of the Advanced Digital Libraries Conference, 1998 (hereinafter "Zaiane").

Appellants reserve the right to disqualify Aggarwal as "prior art" in a subsequent proceeding.

VII. ARGUMENT

For the reasons explained below, Appellants respectfully submit that the rejections under sections 112 and 103 are improper, and request that these rejections be reversed.

1.   **Rejection of Claims 46 and 59 under 35 U.S.C. § 112, second paragraph**

Claims 46 and 59 stand rejected under 35 U.S.C. § 112, second paragraph, as "being incomplete for omitting essential steps, such steps amounting to a gap between the steps." Because nothing in the specification or in other statements of record indicates that any subject matter omitted from these claims is essential, Appellants respectfully submit that the rejection is improper.

<div align="center">Claim 46</div>

Claim 46 reads as follows:

> 46.   The method of Claim 38, wherein the method comprises causing the set of items to be displayed on a referring web site in said subset.

According to the Examiner, Claim 46 omits essential steps because independent Claim 38, from which it depends, describes no mechanism by which interaction of any type can occur on the referring web site. In support of this rejection, the Examiner cites MPEP § 2172.01 ("Unclaimed Essential Subject Matter"), which reads in relevant part as follows:

> A claim which omits matter disclosed to be essential to the invention as described in the specification or in other statements of record may be rejected under 35 U.S.C. 112, first paragraph, as not enabling. Such essential matter may include missing elements, steps or necessary structural cooperative relationships of elements described by the applicant(s) as necessary to practice the invention. In addition, a claim which fails to interrelate essential elements of the invention as defined by applicant(s) in the specification may be rejected under 35 U.S.C. 112, second paragraph, for failure to point out and distinctly claim the invention. (Case citations omitted.)

Appellants respectfully submit that the rejection of Claim 46 is improper. Nothing in the specification or in other statements of record suggests that the step of "causing the set of items to be displayed on a referring web site" needs to be performed in any particular way. Indeed, the specification mentions several possible ways of accomplishing this task. These include (1) having the target site periodically "push" a list of recommended items to the referring site, so that the referring site can incorporate this list into web pages it generates, (2) having the referring site request/retrieve this list from the target site, and (3) having the user computer request/retrieve this list from the target site, as would be the case if, for example, a web page of the referring site

were encoded to cause the user's browser/computer to make such a request. See, e.g., page 32, lines 1-8 of the specification. Nothing in the record, or in the MPEP section cited by the Examiner, requires Appellants to limit the claim to any of these methods.

In addition, nothing in the specification or statements of record suggests that the invention as a whole is limited to a particular mechanism for causing the recited "set of items" to be displayed on a referring web site. To the contrary, Appellants have made it clear that the invention, as defined in at least some claims, does not require the set of items to be displayed on a referring web site. For example, by using "and/or" in the last subparagraph of independent Claim 38, Appellants have indicated that the set of items can be displayed on the target web site, on the referring web site, or both. Corresponding statements can be found in the specification (see, e.g., page 3, lines 1-11). Because the invention does not require the set of items to be displayed on a referring web site, the invention clearly does not require any particular mechanism for causing the items to be displayed on the referring web site.

In view of the foregoing, Appellants submit that Claim 46 does not omit essential subject matter, and that the rejection is therefore improper.

<u>Claim 59</u>

Claim 59 reads as follows:

> 59.   The computer system of Claim 53, wherein the recommendations service is configured to cause the set of items to be displayed on a referring site of said subset of referring sites.

The Final Office Action does not provide a separate basis for the rejection of Claim 59. To the extent the Examiner's basis for rejecting Claim 59 is the same as for Claim 46, Appellants respectfully submit that the rejection is improper for substantially the same reasons as explained above. Specifically, Appellants submit that nothing in the specification or in other statements of record suggests either (1) that the recitation "to cause the set of items to be displayed on a referring site" must be limited to a particular mechanism for causing the set of items to be displayed on a referring site, or (2) that the invention as a whole requires such a mechanism.

2.   **Rejection of Claims 38-65 under 35 U.S.C. § 103(a) over Aggarwal in view of Zaiane**

Claims 38-65 stand rejected under 35 U.S.C. § 103(a) over Aggarwal in view of Zaiane. Claims 38 and 53 are independent. Appellants respectfully submit that the rejection is improper because, as explained below, the combined teachings of Aggarwal and Zaiane would not have suggested the claimed invention to one of skill in the art.

<u>Discussion of Cited References</u>

Aggarwal discloses a process for recommending products to customers of an e-commerce site based on the products browsed and/or purchased by the customers. The process involves using textual descriptions of the various products to generate "product characterizations" (weighted lists of keywords) for particular products. The product characterizations of the various products browsed and/or purchased by a given customer are concatenated to generate a "customer characterization" reflecting the customer's product preferences. For example, the product browsing/purchasing activities of a given customer might lead to the following customer characterization: HEAVY (1), METAL (1), SONY (1), MUSIC (3). See abstract and col. 3, line 59 to col. 4, line 19.

To generate recommendations, Aggarwal clusters together customers with similar customer characterizations to form "peer groups," and uses these peer groups to identify products to recommend. For example, once a particular customer has been matched to a particular peer group, the products most frequently purchased by members of the peer group may be recommended to this customer. See abstract, col. 4, lines 21-28, col. 5, lines 6-10, and col. 6, line 59 to col. 8, line 57. Aggarwal does not disclose the tracking of information about the web sites that refer customers to the e-commerce site, or the use of such information to generate recommendations.

A significant deficiency in Aggarwal's process is that recommendations cannot be provided to a new user of the e-commerce site until that user has browsed and/or purchased some number of products. Thus, for example, when a new user is initially referred to the e-commerce site from a referring site, Aggarwal's e-commerce site apparently would not be able to provide recommendations to the user. Instead, the e-commerce site would apparently have to monitor the user's browsing and/or purchasing activities until sufficient data is collected to generate a

customer characterization. See Aggarwal at col. 8, lines 50-57. As a result, the user might lose interest in the e-commerce site, and move on to a different site, before any recommendations can be provided.

The present invention addresses this deficiency by using information about the referring site, in combination with data reflecting the item preferences of other referred users, to identify items to present to the user. This eliminates the need for information about the item browsing/purchasing behaviors of the user for whom the item recommendations are generated (although such information may be considered, if available). Thus, for example, if users referred from a particular referring site tend to have a strong affinity for items related to golf, golf-related items can automatically be recommended to new users referred from this referring site, regardless of whether the actual item preferences of these new users are known. As discussed above, these recommendations could additionally or alternatively be incorporated into pages of the referring site.

Zaiane does not teach or suggest a solution to this deficiency in Aggarwal's methods. Zaiane discloses methods and commercially available tools for analyzing web logs to extract information about web browsing behaviors of users. As noted by the Examiner, Zaiane mentions that these web logs can include referrer information which identifies a referring site. However, nothing in the references suggests incorporating such referring site information into Aggarwal's recommendation methods—either generally or in the particular manner defined in Appellants' claims. Indeed, it is not clear from the references how such referring site information would be incorporated into Aggarwal's process, or whether this addition would improve Aggarwal's product recommendations.

With this background, Appellants turn to the specific claims at issue.

<u>Independent Claim 38</u>

Claim 38 reads as follows:

38.   A computer-implemented method, comprising:

tracking referrals of users from each of a plurality of referring web sites to a target web site that hosts an electronic catalog of items, said referrals resulting from user selections of links provided on the referring web sites;

identifying a group of users referred to the target web site by a selected subset of said plurality of referring web sites, said group of users comprising a plurality of users, and representing a subpopulation of a general user population of the target web site;

collecting user activity data reflective of preferences of particular users for particular items represented in the electronic catalog of items, said user activity data encompassing actions of both members and non-members of said group of users;

identifying a set of items that correspond to group preferences of said group of users, wherein the set of items is identified based on the collected user activity data of both the members and the non-members of said group of users; and

causing the set of items to be displayed (a) on the target web site to users who are referred thereto from a referring web site in said subset of referring web sites, and/or (b) on a referring web site in said subset of referring web sites.

In rejecting Claim 38, the Examiner appears to acknowledge that Aggarwal clusters users based solely on their product browsing/purchasing activities on the e-commerce site, and not based on identities of sites that referred these users to the e-commerce site. The Examiner nevertheless contends that it would have been obvious to incorporate referring site information into Aggarwal's process in view of Zaiane's disclosure that such information is commonly logged. According to the Examiner, a motivation existed to do so because the referring site data is "readily available" and "provides additional quantifiable data" from which Aggarwal could improve its customer characterizations and recommendations. See Final Office Action at paragraphs 8a and 8b on pages 4 and 5. The Examiner also apparently contends that the combination would fall within the scope of Claim 38.

Appellants respectfully disagree with the Examiner's contentions for the following reasons: (a) Aggarwal and Zaiane do not teach the desirability, and thus the obviousness, of the asserted combination, (b) even if Aggarwal and Zaiane were combined, the combination would not operate as described in Claim 38, and (c) one skilled in the art would not have been able to combine the references with a reasonable expectation of success. For each of these reasons, the combined teachings of Aggarwal and Zaiane would not have suggested the claimed invention to one of skill in the art, and the rejection is improper. Each of these bases for traversing the rejection is addressed separately below.

a.   Desirability of the combination (motivation to combine)

One skilled in the art would not have been motivated to add the Zaiane's referring site information to Aggarwal's recommendation process because neither reference suggests the desirability of doing so. See MPEP 2143.01 ("The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination," citing In re Mills, 916 F.2d 680; 16 USPQ2d 1430 (Fed Cir. 1990), emphasis original.) In this regard, neither reference suggests that a correlation exists between the product preferences of users and the sites from which these users were referred. Without some suggestion of such a correlation, there would be no reason to believe that Aggarwal's product recommendations would be improved. Thus, one skilled in the art would not have been motivated to attempt the asserted combination.

Even if information about referring sites were "readily available" (as asserted by the Examiner), the result would be the same. Indeed, in the context of Aggarwal's e-commerce site, numerous types of information about the customers would typically be available, including, e.g., their IP addresses, email addresses, shipping addresses, and payment information. It does not follow, however, that one skilled in the art would have been motivated to incorporate each such type of information into Aggarwal's clustering and recommendation processes. To the contrary, a motivation to do so would exist only if there were some reason to believe the addition would lead to improved product recommendations.

b.   The combined system would not operate as claimed

Even if Zaiane's referring site information were added to Aggarwal as asserted by the Examiner, the combination would not operate as set forth in Claim 38. For example, Claim 38 recites the identification of a "group of users referred to the target web site by a selected subset of said plurality of referring web sites," and requires the identification of "a set of items that correspond to group preferences of said group." With the asserted combination, however, users would be clustered into peer groups based on a combination of their product preferences and, where available, information about the referring web sites. A peer group generated via this "hybrid" clustering approach, however, would not be a "group of users referred to the target web site by a selected subset of said plurality of referring web sites" as claimed. Thus, even if the

references were combined as asserted by the Examiner, they still would not teach or suggest all of the limitations of the claim.

      c.   <u>Reasonable expectation of success</u>

      Finally, even if one would have attempted the asserted combination, there still would not have been a reasonable expectation of success. See MPEP 2143. In connection with this issue, Aggarwal's process relies on the existence of product descriptions for the various products that can be browsed and purchased by the users. As discussed above, these product descriptions are used to generate product characterizations (weighted lists of keywords), which are in turn used to generate customer characterizations reflecting the product preferences of customers. These customer characterizations are in turn used to cluster users into peer groups. To add referring site information to Aggarwal's process without changing this basic principal of operation, characterizations of the referring sites would be needed. Nothing in the record, however, suggests that suitable characterizations of the referring sites were available.

      Further, even if one skilled in the art could have obtained or generated characterizations of the referring sites, nothing in the record suggests that the addition of the referring site information would have improved Aggarwal's ability to generate product recommendations. In fact, the addition of the referring site characterizations would likely have produced customer characterizations containing keywords having little to do with the product preferences of the customers. As a result, Aggarwal's ability to cluster customers based on product preferences, and thus to make reliable product recommendations, would likely have been diminished.

      In the Final Office Action, the Examiner appears to assert that one skilled in the art would have added identifiers of the referring sites, rather than characterizations of these sites, to the corresponding customer characterizations. Because this would involve a significant departure from Aggarwal's use of weighted keyword lists to characterize the customers, Appellants respectfully disagree. Moreover, nothing in the record suggests that the addition of referring site identifiers to Aggarwal's customer characterizations would have produced improved product recommendations.

      For these reasons, the Examiner has not established that Zaiane's referring site information could have been added to Aggarwal's recommendation process with a reasonable

expectation of success.   The foregoing obstacles to successfully adding such information also further reveal that no motivation existed to combine the references.

For each of the foregoing reasons (a), (b) and (c), Appellants respectfully submit that the combined teachings of Aggarwal and Zaiane would not have suggested the invention of Claim 38 to one skilled in the art, and submit that the rejection is improper.

<div style="text-align:center">Independent Claim 53</div>

Claim 53 reads as follows:

53.   A computer system, comprising:

a referral tracking system that tracks referrals of users from a plurality of referring sites to a target site, said target site including an electronic catalog of items;

a data repository that stores user activity data reflective of user actions performed with respect to items represented in the electronic catalog, said user activity data reflective of user preferences for particular items; and

a recommendations service configured to (a) identify a group of users that have been referred to the target site by a selected subset of the referring sites, (b) analyze the user activity data of both members and non-members of said group to identify a set of items that are significantly more popular in the group than in a general user population of the target site, and (c) cause the identified set of items to be suggested to users that visit a referring site in said subset of referring sites.

The Examiner did not separately address Claim 53 in the Final Office Action, but rather addressed Claims 38 and 53 (and several dependent claims) collectively.

The rejection of Claim 53 is improper because, as explained above in connection with Claim 38, one skilled in the art would not have been motivated to add referring site information as disclosed in Zaiane to Aggarwal's recommendation process.   This is because nothing in the references suggests that this addition would lead to improved product recommendations.

The rejection of Claim 53 is also improper because the combination of Aggarwal and Zaiane would not fall within the scope of Claim 53.   For example, the combination would not include a recommendation service configured to both "identify a group of users that have been referred to the target site by a selected subset of the referring sites" and "identify a set of items that are significantly more popular in the group than in a general user population."   With the

asserted combination, the peer groups would be formed based on a combination of collected product preference information and referring site information, and thus would not represent the type of group described in the claim. In addition, the process of using these peer groups to generate recommendations apparently would involve identifying items that "are significantly more popular in the group than in a general user population." Because the asserted combination would not meet these limitations, the combined teachings of the references do not teach or suggest all of the limitations of the claims.

The rejection of Claim 53 is also improper because, as explained above for Claim 38, one skilled in the art would not have been able to combine the references with a reasonable expectation of success. In this regard, nothing in the references suggests that one skilled in the art would have been successful at improving the product recommendations through the use of referring site information.

For the foregoing reasons, Appellants respectfully submit that the combined teachings of Aggarwal and Zaiane would not have suggested the invention of Claim 53 to one skilled in the art, and submit that the rejection is improper.

<div align="center">Dependent Claims</div>

The rejections of Claims 39-52 and 54-65 are improper in view of their dependencies from Claims 38 and 53, respectively. In addition, the rejections of these dependent claims are improper for the additional reasons detailed below for specific claims. By declining to separately argue some of the dependent claims, Appellants do not imply that the limitations added by such claims are taught or suggested by the references.

<div align="center">Dependent Claim 39</div>

The rejection of Claim 39 is additionally improper because Aggarwal and Zaiane do not teach or suggest the following limitations added by this claim: "wherein identifying the set of items comprises programmatically analyzing the collected user activity data of the members and non-members of the group to identify items that are significantly more popular among the group of users than in the general user population." In connection with these limitations, the Examiner cites Aggarwal at col. 7, lines 1-55. The cited portion of Aggarwal describes how a customer's characterization is generated and then used to match the customer to a peer group. Nothing in

this description, or in the subsequent description of how the peer group is used to process queries, involves "analyzing the collected user activity data of the members and non-members of the group to identify items that are significantly more popular among the group of users than in the general user population."

<div align="center">Dependent Claim 40</div>

The rejection of Claim 40 is additionally improper because Aggarwal and Zaiane do not teach or suggest the following limitations: "wherein identifying the set of items comprises programmatically analyzing the collected user activity data of the members and non-members of the group to identify items for which the group's preferences are significantly greater than the general user population's preferences." In connection with these limitations, the Examiner cites Aggarwal at col. 7, lines 1-55 which, as explained above, describes how a customer's characterization is generated and used to match the customer to a peer group. Nothing in this description, or in the subsequent description of how the peer group is used to process queries, involves "analyzing the collected user activity data of the members and non-members of the group to identify items for which the group's preferences are significantly greater than the general user population's preferences."

<div align="center">Dependent Claim 44</div>

The rejection of Claim 44 is additionally improper because Aggarwal and Zaiane do not teach or suggest the following limitations: "wherein the method comprises causing the set of items to be displayed on a page that is initially presented to a user when the user is referred to the target web site from a referring web site in said subset of referring web sites." Indeed, neither reference discloses the display of selected items on a page that is initially presented when a user is referred to a target web site. The disclosure at column 8, lines 50-57 (cited by the Examiner) does not disclose or suggest this feature.

<div align="center">Dependent Claim 45</div>

Claim 45 depends from Claim 44. The rejection of Claim 45 is improper for the reasons explained above for Claim 44, and is additionally improper because Aggarwal and Zaiane do not teach or suggest that the page on which the set of items is displayed is a "product detail page." The Final Office Action does not appear to fully address the limitations of Claim 45.

<div align="center">-14-</div>

Dependent Claim 46

The rejection of Claim 46 is additionally improper because Aggarwal and Zaiane do not teach or suggest the following limitations: "wherein the method comprises causing the set of items to be displayed on a referring web site in said subset of referring web sites." In connection with these limitations, the Examiner cites Aggarwal at column 8, lines 50-57. Final Office Action at page 6, paragraph e. Nothing in the cited portion of Aggarwal, however, suggests displaying the selected items on a referring web site. Indeed, Aggarwal does not even mention a referring web site.

Dependent Claim 47

The rejection of Claim 47 is additionally improper because Aggarwal and Zaiane do not teach or suggest the following limitations: "wherein the set of items is caused to be displayed together with a community name associated with said group of users." The Examiner acknowledges that the references at least arguably do not disclose this feature. Nevertheless, the Examiner contends that the displayed data (i.e., the community name) is nonfunctional descriptive material that cannot distinguish the claim from the prior art. Final Office Action at page 8, first full paragraph.

Appellants respectfully disagree. The "community name" referred to in Claim 47 clearly has a functional relationship to the claimed process. Specifically, this name enables the end user to associate the displayed set of items with a corresponding user group or community. See, e.g., Figures 2 and 3 of the present application, which illustrate the display of the community names "Tiger Woods Fans" and "Golf Enthusiasts" with corresponding lists of items. This information can be helpful to users in assessing the displayed items, and in understanding why they were selected for display. Given this functional relationship, the term "community name" is properly treated as providing a distinction over the cited references. See MPEP 2106.01, section II. The cases cited by the Examiner do not suggest otherwise.

Dependent Claim 57

The rejection of Claim 57 is additionally improper because Aggarwal and Zaiane do not teach or suggest the following limitations: "wherein the recommendations service is configured to cause the set of items to be displayed on a page that is initially presented to a user when the

user is referred to the target site from a referring site in said subset of referring sites." The disclosure at column 8, lines 50-57 (cited by the Examiner) does not disclose or suggest this feature. As discussed above in connection with Claim 44, neither reference discloses the display of selected items on a page that is initially presented when a user is referred to a target web site.

Dependent Claim 58

Claim 58 depends from Claim 57. The rejection of Claim 58 is improper for the reasons explained above for Claim 57, and is additionally improper because Aggarwal and Zaiane do not teach or suggest that the page on which the set of items is displayed is a "product detail page" of the target site. The Final Office Action does not appear to fully address this claim.

Dependent Claim 59

The rejection of Claim 59 is additionally improper because Aggarwal and Zaiane do not teach or suggest the following limitations: "wherein the recommendations service is configured to cause the set of items to be displayed on a referring site of said subset of referring sites." In connection with these limitations, the Examiner cites Aggarwal at column 8, lines 50-57. Final Office Action at page 6, paragraph e. Nothing in the cited portion of Aggarwal, however, suggests that Aggarwal's system displays the selected items on a site that refers users to the disclosed e-commerce site. Indeed, Aggarwal does not even mention such a referring site.

Dependent Claim 60

The rejection of Claim 60 is additionally improper because Aggarwal and Zaiane do not teach or suggest the following limitations: "wherein the recommendations service is configured to cause the set of items to be displayed together with a community name associated with said group of users." For the reasons explained above for Claim 47, Appellants respectfully disagree with the Examiner's position that this claim involves nonfunctional descriptive material. To the contrary, the added limitations, including the term "community name," properly distinguish Claim 60 from the cited references.

Dependent Claim 65

The rejection of Claim 65 is additionally improper because Aggarwal and Zaiane do not teach or suggest the following limitations: "wherein the recommendations service is configured to identify items that are unusually popular in each of a plurality of groups, each group

corresponding to a different respective subset of the referring sites, and corresponding to a different area of user interest." The Final Office Action does not fully address these limitations.
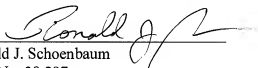
VIII. <u>CONCLUSION</u>

For the reasons set forth above, Appellants respectfully submit that the rejections of Claims 38-65 are improper, and request that these rejections be reversed.

Respectfully submitted,

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CLAIMS APPENDIX

38.   A computer-implemented method, comprising:

tracking referrals of users from each of a plurality of referring web sites to a target web site that hosts an electronic catalog of items, said referrals resulting from user selections of links provided on the referring web sites;

identifying a group of users referred to the target web site by a selected subset of said plurality of referring web sites, said group of users comprising a plurality of users, and representing a subpopulation of a general user population of the target web site;

collecting user activity data reflective of preferences of particular users for particular items represented in the electronic catalog of items, said user activity data encompassing actions of both members and non-members of said group of users;

identifying a set of items that correspond to group preferences of said group of users, wherein the set of items is identified based on the collected user activity data of both the members and the non-members of said group of users; and

causing the set of items to be displayed (a) on the target web site to users who are referred thereto from a referring web site in said subset of referring web sites, and/or (b) on a referring web site in said subset of referring web sites.

39.   The method of Claim 38, wherein identifying the set of items comprises programmatically analyzing the collected user activity data of the members and non-members of the group to identify items that are significantly more popular among the group of users than in the general user population.

40.   The method of Claim 38, wherein identifying the set of items comprises programmatically analyzing the collected user activity data of the members and non-members of the group to identify items for which the group's preferences are significantly greater than the general user population's preferences.

41.   The method of Claim 38, wherein the user activity data comprises data descriptive of item purchases made by users.

42.   The method of Claim 38, wherein the user activity data comprises user-specific item viewing histories.

43.   The method of Claim 38, wherein the method comprises causing the set of items to be displayed on the target web site to users who are referred thereto from a referring web site in said subset of referring web sites.

44.   The method of Claim 38, wherein the method comprises causing the set of items to be displayed on a page that is initially presented to a user when the user is referred to the target web site from a referring web site in said subset of referring web sites.

45.   The method of Claim 44, wherein the page is a product detail page of the target web site.

46.   The method of Claim 38, wherein the method comprises causing the set of items to be displayed on a referring web site in said subset of referring web sites.

47.   The method of Claim 38, wherein the set of items is caused to be displayed together with a community name associated with said group of users.

48.   The method of Claim 38, wherein the subset of referring web sites consists of a single referring web site.

49.   The method of Claim 38, wherein the subset of referring web sites includes one or more associate web sites.

50.   The method of Claim 38, wherein the subset of referring web sites consists of a plurality of referring web sites that are associated with a common topic.

51.   The method of Claim 38, wherein the items include books that are available for purchase from the target web site.

52.   The method of Claim 38, further comprising repeating the method for each of a plurality of additional groups of users, each group corresponding to a different respective subset of the plurality of referring web sites, and corresponding to a different respective topic.

53.   A computer system, comprising:

a referral tracking system that tracks referrals of users from a plurality of referring sites to a target site, said target site including an electronic catalog of items;

a data repository that stores user activity data reflective of user actions performed with respect to items represented in the electronic catalog, said user activity data reflective of user preferences for particular items; and

a recommendations service configured to (a) identify a group of users that have been referred to the target site by a selected subset of the referring sites, (b) analyze the user activity data of both members and non-members of said group to identify a set of items that are significantly more popular in the group than in a general user population of the target site, and (c) cause the identified set of items to be suggested to users that visit a referring site in said subset of referring sites.

54.   The computer system of Claim 53, wherein the user activity data identifies item purchases made by particular users.

55.   The computer system of Claim 53, wherein the user activity data comprises user-specific item viewing histories.

56.   The computer system of Claim 53, wherein the recommendations service is configured to cause the set of items to be displayed on the target site to users who are referred thereto from a referring site in said subset of referring sites.

57.   The computer system of Claim 53, wherein the recommendations service is configured to cause the set of items to be displayed on a page that is initially presented to a user when the user is referred to the target site from a referring site in said subset of referring sites.

58.   The computer system of Claim 57, wherein the page is a product detail page of the target site.

59.   The computer system of Claim 53, wherein the recommendations service is configured to cause the set of items to be displayed on a referring site of said subset of referring sites.

60.   The computer system of Claim 53, wherein the recommendations service is configured to cause the set of items to be displayed together with a community name associated with said group of users.

61.   The computer system of Claim 53, wherein the subset of referring sites consists of a single referring site.

62.   The computer system of Claim 53, wherein the subset of referring sites includes a plurality of referring sites associated with a common area of interest.

63.   The computer system of Claim 53, wherein the subset of referring sites includes one or more associate sites.

64.   The computer system of Claim 53, wherein the items include books that are available for purchase from the target site.

65.   The computer system of Claim 53, wherein the recommendations service is configured to identify items that are unusually popular in each of a plurality of groups, each group corresponding to a different respective subset of the referring sites, and corresponding to a different area of user interest.

EVIDENCE APPENDIX

None

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RELATED PROCEEDINGS APPENDIX

None